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ABSTRACT

This paper explores how teachers of public relations can help students tolerate the many ambiguities inherent in public relations practice. The paper first reviews the literature regarding individual differences in communication, tolerance-intolerance of ambiguity, and individual differences in teaching. The paper then reports the findings of two exploratory studies conducted at a large state university in Florida that investigated the effects of tolerance-intolerance of ambiguity in the teaching of public relations, including the use of a client-based, case study technique to increase tolerance of ambiguity among students of public relations. The paper concludes that the goal of increasing tolerance of ambiguity in public relations, at least in the classroom, is possible. (Nine tables of data are included; a list of 68 references is attached.) (Author/RS)

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Tolerance-Intolerance of Ambiguity and the Teaching of Public Relations: Investigating Effects of Individual Differences in the Classroom

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Abstract

Tolerance-Intolerance of Ambiguity
and the Teaching of Public Relations:
Investigating Effects of Individual Differences
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The paper explores how teachers of public relations can help students tolerate the many ambiguities inherent in public relations practice. Literatures regarding individual differences in communication, tolerance-intolerance of ambiguity, and individual differences in teaching are reviewed. The findings of two exploratory studies are reported that investigate the effects of tolerance-intolerance of ambiguity in the teaching of public relations, including the use of a client-based, case-study technique to increase tolerance of ambiguity among students of public relations.

Ambiguities of almost every sort engulf public relations. In practice, public relations problems offer a bewildering array of competing solutions, ranging from multi-step, complicated campaigns over long periods of time to a judicious use of no action at all (Cutlip, Center & Broom, 1985; Haberman & Dolphin, 1988; Kendall, 1992; Seitel, 1989). At the extreme, activities associated with applied public relations may be so characteristically "unstructured" that the field becomes "a jungle" (Files, 1986, p. 41). Such variation and lack of structure brings to bear considerable ambiguity in public relations.

Some have attempted to clear a path through the jungle. Bernays (1977) once believed the practice of public relation could be streamlined by modeling itself after the practice of law. Public relations practioners, like attorneys, would seek out precedent cases, then practitioners would use these precedents as guides to solve their clients' problems. But Bernays eventually gave up the notion because public relations is too fluid to fit the legal model; public relations has too many ever-changing variables that constantly transform situations in which public relations engages, negating any precedents.

While definitions in other fields often function to reduce ambiguity, the multiplicity and diversity of definitions in public relations tend to amplify ambiguities

in the field. At worst, public relations has been paired with derogatory descriptors like "flack" (Wilcox et al., 1986, p. 14); recent AP wire reports likened its practitioners to weasels (Hampson, 1991). At best, public relations is associated with management functions, policy making for the public interest, strategic planning to earn public understanding and acceptance (Kendall, Baxter & Pessolano, 1988) and harmonious symmetry (Grunig & Hunt, 1984); and calls its practitioners "applied social and behavioral scientists" (Robinson, 1966, p. 7). Under such divergent conditions, defining public relations becomes an ambiguous task.

Another dimension of ambiguity in public relations involves ethics, what the Public Relations Society of America called "doing the right thing" during its 1991 national conference. The situation may become further complicated when one factors in individual differences in tolerance-intolerance of ambiguity, which some researchers have argued is akin to a personality trait (Budner, 1960, 1962; Frenkel-Brunswik, 1949; Steinfatt, 1987). What are the effects of individual levels of tolerance-intolerance of ambiguity in practitioners of public relations, their clients, those teaching public relations, and of students learning public relations?

Purpose of the paper

It is impossible to answer all of these questions in

the scope of a single research paper. Therefore, this paper only addresses the question: What, if anything, can teachers of public relations do to help students sort out and cope with the field's ambiguities? Can tolerance of ambiguity in public relations be taught?

The paper briefly reviews research literature regarding individual differences in communication, tolerance-intolerance of ambiguity, and individual differences in teaching. The paper also reports the findings of two exploratory studies investigating tolerance-intolerance of ambiguity (hereafter referred to as TIA) and the teaching of public relations, including the use of a client-based, case-study technique to increase tolerance of ambiguity in the public relations classroom. In the next section, the literature regarding individual differences is reviewed in brief.

An Overview: Personality Traits as Individual Differences

The present-day contemplation of personality traits and how they interact with human behavior dates back to the ancient Greeks (Allport, 1937). But particularly since the turn of the century, personality has become a popular preserve of psychology and related fields (Ewen, 1988), prompting a rich and growing literature discussing the relationships between individual differences and human behavior.

From numerous studies conducted over many years, the five-factor model of personality has emerged to dominate

contemporary research (Digman, 1990). Called the "Big Five" (Goldberg, 1981), the model reflects the number of relatively stable personality dimensions so far found to be common to human personalities across gender, culture, and time (Eysenck & Eysenck, 1969; Rowland & Francken, 1986; Digman, 1990). Although assigned differing specific labels by different researchers, the dimensions are generally agreed to consist of (1) extraversion/introversion or socialibility; (2) agreeableness; (3) conscientiousness or will to achieve; (4) neuroticism or emotional stability; and (5) intelligence (Digman, 1990).

Numerous studies of biogentics and personality, many involving identical and fraternal twins raised together and/or apart (Bouchard & McGue, 1990; Tellegen et al., 1988; Lykken, 1981; Lykken, Tellegen & Iacono, 1982; Carey, Goldsmith, Tellegen & Gottesman, 1978; Carey & Rice, 1983; Scarr, Webber, Weinberg & Wittig, 1981), conclude that personality traits are about fifty percent inherited (Digman, 1990; Buss, 1990).

Although the family of communication research--including mass communication and public relations--has derived much of its theory and methodology from the behavioral sciences, especially psychology, communication research typically stops short of elaboration, application, or interpretation of personality traits. Yet several aspects of mass communication seem particularly appropriate for study from the perspective of individual differences

attributed to personality. The next section briefly reviews a few highlights from the research literature on individual differences in communication.

Individual Differences and Communication

Some pioneering studies have considered individual differences in communication, including mass communication, with spectacular results. An example is Festinger's cognitive dissonance research which argued that individuals selectively perceive and retain information depending on levels of dissonance generated by inconsistencies in the information. Several studies stemming from the notion of cognitive dissonance examined the effects of personality traits (Martin, 1982).

Some of Hovland's classic studies concluded that it is easier to persuade individuals with higher intelligence than lower, as long as the arguments used to persuade them stand up to scrutiny. In another, individuals who were more susceptible to persuasion were found to often suffer low self-esteem, social inadequacy, inhibition, and depression (Hovland, Janis & Kelley, 1953). McCombs and colleagues were among the first to suggest that a personality factor they called need for orientation motivates an individual to seek exposure to media content (McCombs & Shaw, 1972).

Recent research also considering differences among individuals includes uncertainty orientation as it relates to achievement motivation (Sorrentino, Short & Raynor, 1984), and the relationships between need for cognition and

information processing (Cacioppo, Petty & Morris, 1983), as well as mass media usage (Ferguson, Chung & Weigold, 1985).

Ferguson and colleagues (Ferguson, Cho, Darlington, & Valenti, 1990) found that openness to experience, a "Big Five" personality construct, interacts with messages and their typeface styles to impact message elaboration and attitude. In addition, links between media use for arousal, openness, and message content function to affect message elaboration. Also, media use for learning interacts with openness and message content to affect strength of beliefs about the issue of drug use.

Contemporary research clearly suggests that mass media can have substantial effects on its consumers. Research concerned with information-processing, "or how people make sense of the world around them," has proven useful in explaining how people consume news and other information (Kent, 1989, p. 411). An aspect of personality that seems heuristically promising in relation to communication in general and public relations and education in particular is the dimension called tolerance-intolerance of ambiguity (TIA). The next section reviews research relevant to TIA.

Tolerance-Intolerance of Ambiguity in the Literature

Frenkel-Brunswik published "Intolerance of Ambiguity as an Emotional and Perceptual Personality Variable" (1949) around the same time that she and others (Adorno, Frenkel-Brunswik, Levinson & Sanford, 1950) were completing The Authoritarian Personality. Initially conceptualized from

psychoanalytic theory, TIA questioned whether "those incapable of conficting emotions--or of conflicting value judgments--are generally incapable of seeing things in two or more different ways (Frenkel-Brunswik, 1949, p. 120).

Most of the early research about TIA concerned its relationship to authoritarianism, a related concept that researchers eventually treated as a distinctly different variable. By the 1960s, researchers (Budner, 1960, 1962) suggested that TIA becomes aroused in new, complex, or contradictory situations. More recently, TIA has come to be thought of as a "generalized personality variable that would operate across situational contexts with no special conditions necessary for its arousal" (Steinfatt, 1987, p. 59).

Contemporary researchers view the intolerance aspect of TIA as a cognitive intolerance, rather than a behavioral rigidity, involving emotional ambivalence toward authority where ambiguous situations seem threatening, although some of the earlier literature equates intolerance with rigidity. Intolerant personalities are said to attach black or white value judgements to issues, rarely perceiving shades of gray.

The literature indicates that intolerant persons tend to base judgements on first impressions before considering all information available, overlook information that doesn't fit neatly into rigid conceptions of reality, prolong conflict, be less open to new information, and resist change

after interpersonal feedback contradicting initial information. They also tend to avoid information overload while under stress by evading interactions, align themselves with formal belief systems such as religion or political party, avoid close relationships with persons who might require tolerance of ambiguity, use stereotypes, and simplify conceptual categories.

Research experiments have measured TIA with varying degrees of success and have involved manipulations of autokinetic effects, Rorschach tests, contradictory messages, frequency of fluctuations of the Necker Cube, and imprecise pictures (Goldstein & Blackman, 1978; Steinfatt, 1987). Budner's (1960, 1962) scale to measure TIA included the following items, among others: "There is really no such thing as a problem that can't be solved"; "An expert who doesn't come up with a definite answer probably doesn't know too much"; "What we are used to is always preferable to what is unfamiliar"; "The sooner we all acquire similar values and ideals the better"; and "People who insist upon a yes or no answer just don't know how complicated things really are" [reversed].

Reliability of Budner's Scale Reviewed

In Budner's doctoral dissertation (1960) and again in an article extrapolated from the dissertation (1962), Budner reports a mean of Cronbach's alpha measures of reliability of .49 from 17 samples of a total of more than 800 sujects to whom the Budner TIA scale was administered. The alphas

ranged from a low of .39 from a sample of first-year midwestern medical students to a high of .62 from a sample of college freshmen enrolled in an introductory psychology course in the New York suburbs. Other samples included adult education and private women's college sociology classes, an evening graduate business administration class, nursing students at a city hospital, engineering students in a required social studies course, and paid volunteers for a drug experiment who also were graduate students in New York City, with a total N of 947.

Test-retest reliability alpha was reported at .85. Validity coefficients of .48 and .34 were reported for samples of experimental and high school English classes, respectively. As a measure of validity, Budner's scale correlated significantly with the Princeton scale (Saunders, 1955), the Coulter scale (Eysenck, 1954), and the Walk scale (O'Connor, 1952) (Budner 1960, 1962). Despite what most would consider low reliability scores on Budner's scale, Steinfatt (1987) reports it is the most widely used measure of TIA. Budner's scale, together with Rydell and Rosen's (1966) measure, expanded by MacDonald (1970) to become the A-20 scale, and Walk's A-Scale (1970) are "probably the most reliable and valid" (Steinfatt, 1987, p. 61). Certainly on its face, Budner's scale appears to be a more relevant measure of TIA in contemporary culture than some of the earlier measures, which contained items such as: "Girls should learn only things that are useful around the house"

(Frenkel-Brunswik, 1949, p. 123).

Because persons highly intolerant of ambiguity tend to see inconsistency as consistent and complexity as simplicity, the literature suggests that when such persons receive a message they might be expected to fail to recall contradictions, complex details in general, and details that do not match their previous conceptualizations of the situation (Steinfatt, 1987).

As a measure of socially relevant attitudes, Budner (1962) hypothesized, and found support in his data for, the notion that "avoidance of exposure to conflicting value systems, as manifested in favorable attitudes towards censorship of a moral issue, would be positively associated with TIA" (pp. 40-41). Budner also pointed out that because intolerance of ambiguity refers to an evaluative activity, "being intolerant of ambiguity does not lead an individual to favor such things as censorship; rather favoring censorship (in most situations) is part of being intolerant of ambiguity" (p. 49).

In TIA, Intolerance Is Less Ambiguous, Tolerance Is More

Previous research on TIA, then, suggests that persons who are generally more intolerant of ambiguity will tend to evaluate public relations as less ambiguous than those who are more tolerant of ambiguity. Although somewhat counter-intuitive at first glance, when one takes into account the literature that those who are intolerant of ambiguity refuse to recognize and acknowledge ambiguity, the reasoning behind

the position becomes clearer.

The field of education has provided fertile grounds for inquiries into the effects of individual differences on behavior, although not, apparently, TIA specifically. The next section briefly reviews three articles that provide pertinent background for the two exploratory studies undertaken for and reported in this paper.

Individual Differences and Education

An ERIC search for recent research of individual differences/personality factors in education yielded three citations that provided key background for the research endeavors reported in this paper. First was a meta-analysis of research in the United States and Canada found that, under certain conditions, several college teachers' personality traits significantly correlated with the teachers' classroom effectiveness, as determined by colleague and student evaluations of the teachers' performance (Feldman, 1986).

Another study (Kagan and Tixier y Virgil, 1987) administered three measurements of cognitive style with teacher evaluation questionnaires to undergraduates and found that student ratings of teacher performance reflected in part students' cognitive styles. Extroverted-affective students assigned higher teacher ratings than students with highly abstract cognitive styles.

The third study investigated inter-relationships between students' reactivity, or capacity to work;

adaptations to scholastic working environment; perceived teaching style of the instructor; prediction of achievement measured by grades; subjective teacher evaluations of student performance and behavior; and students' self-reports regarding work style and satisfaction (Paisey & Paisey, 1982). Low reactivity was found to be an accurate predictor of successful adaptation and performance in school and vice versa. The authors suggested the study supports other preliminary research into the relationships of personality variables in work environments, as contrasted with the bulk of personality research which has been concerned with social behavior.

Taken together, the three articles provide support for the position that individual differences among students play key roles in a number of factors common to the classroom. Chief among them is student evaluations of teaching performance. Therefore, the literature suggests that individual differences in the classroom and student evaluations of teachers are likely to have a strong relationship regardless of associations of individual differences with other variables of interest.

Overcoming Ambiguities in Teaching Public Relations

Great teachers are innovators who search creatively for more effective ways to teach their materials (Woodward, 1986). A review of recent literature on teaching techniques in public relations are indeed varied as well as creative. Several also appear on the face to be useful in coping with

the ambiguities of public relations. The techniques include developing an operations matrix extending Marston's 1963 R-A-C-E process model to include functions (Files, 1986); and modeling classes as student PR agencies, working with real clients, that gives "students considerable anxiety at the outset but considerable confidence by semester's end (Rayfield and Pincus, 1987, p. 45).

Equally creative techniques involve having students conduct research and produce detailed public relations plans for actual clients that expose the students' "novice" thinking to more "expert" views and experiences (Quarles, 1987, p. 44); having students conduct research and produce a strategic plan for a real client, then supervise implementation of the plan by others (Hunt, 1991); in-class group presentations about relevant course content (Weimer, 1991); and applying cooperative learning models in class presentations of textbook case histories combined with actual campaign work with real clients (Slater, 1991).

Public relations educators have also reported good results in general with tracking current public relations issues (Anderson, 1989); patterning action-reaction exercises after military education tecnigues to bridge gaps between theory and practice (Fleming, 1988); practicing actual research techniques, such as focus groups (Lederman, 1989) and other information-seeking behaviors (Bissland, 1989); analyzing pseudo-events designed to attract media (Larson, 1988); relying on student peer reviews to improve

writing skills (Rayfield, 1988); and simulating the "real world" by means of interactive computers (Pavlik, 1988).

The purpose of this paper restated is to address the general question: What, if anything, can teachers of public relations do to help students sort out and cope with--in other words, tolerate--the field's ambiguities? From the literature reviews and the general research question just presented, several more specific research questions and hypotheses emerge. Descriptions of them immediately follow.

Research Questions and Hypotheses

RQ1: Given the variation in reliability of the TIA scale that Budner (1960) reported between groups with different professional perspectives, will the TIA scale perform differently with regard to reliability when administered to students of public relations?

RQ2: Among students of public relations, are students' levels of TIA, their evaluations of ambiguity in public relations, their evaluations of teaching, and variables such as students' major field of study and interest in eventually working in public relations associated?

RQ3: Is there a difference in how students who are generally more intolerant of ambiguity evaluate ambiguity in public relations compared with evaluations of public relations by students who are generally more tolerant of ambiguity? RQ3 yields the hypotheses that:

H1: Students who are generally more intolerant of ambiguity will evaluate public relations as being less

ambiguous than students who are generally more tolerant of ambiguity, and

H2: Students who are generally more tolerant of ambiguity will evaluate public relations as being more ambiguous than students who are generally more intolerant of ambiguity.

RQ4: Can a particular teaching technique function to increase tolerance of ambiguity with regard to the content of courses relating to public relations? The research question yielded the hypotheses that:

H3: Students who receive instruction in public relations designed as a treatment to increase tolerance of ambiguity about public relations will score more tolerant of ambiguity on the TIA scale after the treatment than students who receive instruction in public relations with no particular effort to increase tolerance of ambiguity about public relations.

H4: Students who receive instruction in public relations designed to increase tolerance of ambiguity in public relations will evaluate public relations as being more ambiguous because their tolerance of ambiguity will have increased more than the TIA score of students who receive instruction in public relations with no particular effort to increase tolerance of ambiguity in public relations.

Research questions 1, 2 and 3 and hypotheses 1 and 2 are addressed by Studies 1 and 2. Research question 4 and

hypotheses 3 and 4 are addressed by Study 2. Desciptions of methods follow.

Methods

The basic instrument used in both studies included the 16-item TIA scale developed by Budner, an 8-item scale modeled after the Budner scale and developed for these studies to measure evaluations of ambiguity in public relations, 6 items measuring student evaluations of the course and the instructor, and demographic information. Although data was collected during class time, student participation in the survey was explicitly voluntary. Anonymity was guaranteed; respondents were instructed to not write their names on the instruments.

Study 1

Of 202 students enrolled in the Fall 1990 Introduction to Public Relations course at a large state university in Florida, 128 completed questionnaires. In the survey, 25% identified themselves as public relations majors, 23% advertising; 3% journalism; 8% other communication areas, including telecommunications and magazine editing; and 38% from outside the college.

Study 2

Since the first set of research questions and hypotheses involve both studies 1 and 2, a brief description of study 2 and how it differs from study 1 follows. Sections of students enrolled in Spring 1991 (Group 1) and Fall 1991 (Group 2) Writing for Public Relations classes at

a large state university in Florida on two occasions completed survey instruments identical to respondents in Study 1. Respondents in both groups initially completed the instrument within the first week of class meetings, and again during the last week of the term, yielding pre- and post-course scores. Students were again asked to not write their own names on the instruments. For matching purposes, students reported only their mothers' maiden name initials and birthdates, after it was ascertained that all respondents possessed that information.

In Group 1, 15 students completed pre-test and post-test surveys (post-test responses from three students who enrolled late and did not complete pre-tests were eliminated from data analysis). In Group 1, 93% identified themselves as public relations majors, and 7% other communication areas, including telecommunications and magazine editing.

In Group 2, all of the students enrolled (N=20) completed pre-test and post-test surveys. In Group 2, 100% identified themselves as public relations majors.
The two groups were homogenous with regard to age, gender, race, and intent to work in public relations after graduation.

Students enrolled in Group 1 were required to accomplish a variety of assignments for a wide variety of public relations situations and clients throughout the term and a term project involving a strategic plan and written elements for a campaign for a client of their choice. While

students' work was discussed in class, virtually all assignments were completely individually, and students had little, if any, direct exposure to public relations problem-solving processes and techniques. The method was judged to contain a fair amount of ambiguity regarding public relations and its practice.

Students enrolled in Group 2 were required to accomplish a variety of assignments for a single class client throughout the term plus the term project involving a strategic plan and written elements for a campaign for a client of their choice. The class together wrote the strategic plan for the class client, an all-volunteer taped text recording service on campus for blind and otherwise handicapped students. Almost all of the remaining in-class writing assignments stemmed from the class's strategic plan. Two of the assignments involved group creative writing tasks as a function of the plan. The method was judged to reduce the amount of ambiguity regarding public relations and its practice compared with the course content and structure for Group 1 (McKeachie, 1986).

Results from Studies 1 and 2

Since the student respondents to these studies do not represent a random sample of any broader population, inferential tests of statistical significance based on their responses cannot to generalized to other populations. However, although the results reported here apply only to the student respondents in these two studies, the results

may be of conceptual significance. Replications with larger samples alone can determine whether critical values of tests of significance reported here are generalizable. Results reported in Tables 1 through 8 were determined by analyses of the data using SPSS+.

Comparing scores on the TIA scale in general, respondents in Study 1 scored below respondents in Study 2 (Study 1 mean of 67.0 and SD 33.41 compared with Study 2 Group 1 mean of 75.9 and SD 13.70 and Group 2 mean of 76.1 and SD 10.35 with a range of 16=strongly disagree to 112=strongly agree for the TIA scale and a range of 1=strongly disagree to 7=strongly agree for individual scale items). Comparisons of descriptive statistics on each of the individual items are reported in Table 1.

TABLE 1 ABOUT HERE

Respondents in Study 1 and in both groups in Study 2 scored the reverse-coded item "I like parties where I know most of the people more than ones where all or most of the people are complete strangers" lowest on the TIA scale. Respondents in Study 1 scored the item "Often the most interesting and stimulating people are those who don't mind being different and original" the highest on the TIA; Study 2 Group 1 respondents scored the item "The sooner we all acquire similar values and ideals the better" the highest, and Study 2 Group 2 respondents scored the item "A good teacher is one who makes you wonder about your way of

looking at things" highest on the TIA scale.

Comparing scores on the amibiguity in public relations scale, respondents in Study 1 again scored below respondents in Study 2 (Study 1 mean of 37.6 and SD 20.01 compared with Study 2 Group 1 mean of 44.1 and SD 4.04 and Group 2 mean of 44.3 and SD 7.24 with a range of 8=strongly disagree to 64=strongly agree for the TIA scale and a range of 1=strongly disagree to 7=strongly agree for individual scale items). Comparisons of descriptive statistics on each of the individual items are reported in Table 2.

TABLE 2 ABOUT HERE

Respondents in Study 1 scored the item "There are so many variables in a public relations situation that you need to be prepared for anything" highest while respondents in both groups in Study 2 scored item "If I worked in public relations, I would personally find it hard to say 'I don't know but I'll find out' to a journalist or my boss when I didn't have all the facts" highest. Respondents in Study 1 and in Group 1 in Study 2 both scored the item "More often than not, the problems that public relations has to solve seem complicated and confusing" lowest, while those in Group 2 Study 2 scored the reverse-coded "Public relations seems pretty straight forward to me" lowest.

Comparing scores on the teaching evaluation scale, respondents in Study 1 again scored below respondents in Study 2 (Study 1 mean of 22.1 and SD 13.14 compared with

Study 2 Group 1 mean of 40.3 and SD 2.71 and Group 2 mean of 37.6 and SD 4.80 with a range of 6=strongly disagree to 42=strongly agree for the TIA in PR scale and a range of 1=strongly disagree to 7=strongly agree for individual scale items). Comparisons of descriptive statistics on each of the individual items are reported in Table 3.

TABLE 3 ABOUT HERE

Respondents in Study 1 and Group 2 Study 2 both scored the item "This course has increased my knowledge and competence about public relations" highest, which respondents in Group 1 Study 2 scored lowest along with the item "The instructor for this course presented the material clearly." Group 2 in Study 2 also scored the latter item the lowest. Respondents in Group 1 scored "I would recommend this instructor to a friend" lowest, the item that Group 1 in Study 1 scored the highest.

Reliability Coefficients Reviewed

Reliability scores in the form of Cronbach's alpha on the TIA scale ranged from a low of .29 in Study 1 to a high of .70 in Group 1 Study 2; and on the ambiguity in PR scale, a low of .32 in Group 1 Study 2 and a high of .75 in Study 1. On the teaching evaluation scale, Cronbach's alpha ranged from a low of .43 in Group 1 Study 2 to .94 in Study 1. The reliability comparisons are reported in Table 4.

TABLE 4 ABOUT HERE

Associations between TIA and Other Variables of Interest

To investigate possible relationships between different levels of TIA, evaluation of ambiguity in public relations (EVALPR), teaching evaluations (TEVAL), major fields of study (MAJOR), and interest in eventually working in public relations (INTWORK), Pearson correlation coefficients were computed among each of the variables. Results are reported in Table 5 for Study 1 and Table 6 for Study 2.

TABLE 5 ABOUT HERE

Different relationships became significant, or non-significant, at varying levels of TIA. For example, for respondents at all levels of TIA and at the moderately high levels (30% and 50% of respondents) of intolerance of ambiguity, the associations between EVALPR and TEVAL and EVALPR and INTWORK are significant, but the relationships become non-significant at the higher, more extreme level of intolerance (22% of respondents), at which MAJOR and INTWORK become significant.

At the moderately tolerant level (28% of respondents), only the association between EVALPR and TEVAL is significant, while at the extremely tolerant level (10% of respondents) only the correlation between TEVAL and MAJOR is significant. In comparisons of correlations in responses

in Study 2, none of the relationships among variables is significant.

TABLE 6 ABOUT HERE

Differences in Respondent's TIA Levels

An analysis of variance of Study 1 evaluations of ambiguity in public relations (EVALPR) at high and low levels of TIA approached significance at the alpha = .05 level ($F=3.195$, $p=.08$). The mean of EVALPR by respondents extremely intolerant of ambiguity (N=13, or 10% of respondents) was 42.2, with a range of 6=strongly disagree to 42=strongly agree for the TIA scale. The mean of EVALPR by respondents extremely tolerant of ambiguity (N=11, or 9% of respondents) was 45.9. The ANOVA results are reported in Table 7.

TABLE 7 ABOUT HERE

Comparisons of responses in Study 1 with Study 2 to scales measuring TIA, evaluations of ambiguity in public relations and teaching evaluations by means of t-tests revealed that there were no significant differences in TIA. However, there were significant differences between responses in Study 1 and Study 2 on both evaluations of ambiguity in public relations and teaching evaluations. Results of the separate variance estimate t-tests, a method selected because of the unequal numbers of subjects in the two groups, are reported in Table 8.

TABLE 8 ABOUT HERE

Results from Study 2: Effects of Teaching Techniques

Analysis of covariance using SAS was conducted to determine if there were any differences in Study 2 between Group 1, which received no particular teaching technique treatment to reduce ambiguities in the teaching public public relations, and Group 2, which received the "class client/case study" treatment believed to reduce ambiguities in the teaching public relations. ANCOVA was conducted on pre- and post-measures of TIA and evaluation of ambiguity in public relations to compare both groups in Study 2.

The method of ANCOVA was selected because of its enhanced power over paired t-tests in determining differences between groups pre- and post-scores. ANCOVA is also preferred in analyzing data in samples such as this in which there has been no random assignment with regard to treatment and control (Chatterjee & Price, 1991; Agresti & Finlay, 1986).

Pre-tests for the TIA scale yielded a mean score of 74.1 for Group 1 (N=15) with an SD of 9.04 and minimum score of 53, maximum of 86; and a mean score of 71.7 for Group 2 (N=20) with an SD of 8.98 and minimum score of 57, maximum of 86. Post-tests for the TIA scale yielded a mean score of 75.9 for Group 1 with an SD of 13.70 and minimum score of 40, maximum of 91; and a mean score of 76.1 for Group 2 with an SD of 10.35 and minimum score of 60, maximum of 106. The

ANCOVA yielded an F-value of 18.97, p=.0001.

Pre-tests for the ambiguity in public relations scale yielded a mean score of 43.3 for Group 1 (N=15) with an SD of 5.37 and minimum score of 32, maximum of 50; and a mean score of 44.2 for Group 2 (N=20) with an SD of 4.69 and minimum score of 33, maximum of 51. Post-tests for the TIA scale yielded a mean score of 44.1 for Group 1 with an SD of 4.04 and minimum score of 39, maximum of 53; and a mean score of 44.3 for Group 2 with an SD of 7.24 and minimum score of 32, maximum of 58. The ANCOVA yielded an F-value of 3.16, p=.038. The results are reported in Table 9.

TABLE 9 ABOUT HERE

Discussion and Conclusions

Given the variation in reliability of the TIA scale that Budner (1960, 1962) reported between groups with different professional perspectives, RQ1 in this paper asked: How reliably will the TIA scale perform when administered to students of public relations? Budner's samples averaged a Cronbach's alpha of .49, from a low of .39 and a high of .62. Cronbach's alpha in these studies averaged .63, from a low of .29 and a high of .70.

It is interesting that the highest reliabilities were found in the TIA scores of the two groups of subjects in Study 2, almost all of whom were public relations majors. These subjects also scored considerably higher on the TIA scale, indicating they were more tolerant of ambiguity to

begin with than the subjects who participated in Study 1. Only 25% of the subjects were public relations majors in Study 1 and more than one-third were majoring in subjects outside the college. Perhaps Budner's TIA scale is more reliable in measuring tolerance of ambiguity than intolerance. It appears that the more advanced public relations students in these samples were more tolerant of ambiguity than those with other majors and less advanced public relations students.

Levels of TIA Affect Relationships with Other Variables

Among students of public relations, RQ2 asked whether there are associations between students' levels of TIA and their evaluations of ambiguity in public relations, their evaluations of teaching, and variables such as major field of study and interest in eventually working in public relations. Indeed, for subjects in these samples, different relationships became significant and non-significant as levels of TIA varied.

At the highest levels of intolerance, associations betwee major course of study and interest in working in public relations became significant. Lower levels of intolerance strengthened associations between evaluations of ambiguity in public relations, teaching evaluations and interest in working in public relations. Moderate tolerance strengthened relationships between evaluations of ambiguity in public relations and teaching evaluations, while extreme tolerance strengthened links between teaching evaluations

and major. Additional research with greater numbers of subjects is needed to determine whether TIA levels function to create any stable patterns in correlations between these variables.

Student evaluations of teaching in these samples follow the pattern of significantly lower evaluations by students of teachers in large lecture classes, as in Study 1, compared with typically higher evaluations in smaller classes, as in Study 2 (McKeachie, 1986). While there were large differences between teaching evaluations in Study 1 and Study 2, the evaluations were well within ranges experienced by other instructors of these courses at the university where this research was conducted.

In PR, Tolerance Is More, Intolerance Is Less

RQ3 asked if students who are generally more intolerant of ambiguity evaluate ambiguity in public relations compared with evaluations of public relations by students who are generally more tolerant of ambiguity and yielded two hypotheses. They were H1: Students who are generally more intolerant of ambiguity will evaluate public relations as being less ambiguous than students who are generally more tolerant of ambiguity, and H2: Students who are generally more tolerant of ambiguity will evaluate public relations as being more ambiguous than students who are generally more intolerant of ambiguity. The data analysis testing these two hypotheses approached significance at alpha = .05, suggesting that additional research needs to be conducted to

clarify the situation.

Learning to Tolerate Ambiguity in PR

This paper set out to address the general question: What, if anything, can teachers of public relations do to help students sort out and cope with the field's ambiguities? From it was derived RQ4: Can a particular teaching technique function to increase tolerance of ambiguity in courses relating to public relations. From that, two hypotheses followed:

H3: Students who receive instruction in public relations designed as a treatment to increase tolerance of ambiguity in public relations will score more tolerant of ambiguity on the TIA scale after the treatment than students who receive instruction in public relations with no particular effort to increase tolerance of ambiguity in public relations, and

H4: Students who receive instruction in public relations designed to increase tolerance of ambiguity in public relations will evaluate public relations as being more ambiguous because their tolerance of ambiguity will have increased more than the TIA score of students who receive instruction in public relations with no particular effort to increase tolerance of ambiguity in public relations.

The data analyses testing these two hypotheses were significant at alpha = .05 suggesting, for the two groups of subjects in Study 2, that a case-study approach involving an

actual class client as a teaching technique functions to increase students' tolerance of ambiguity in general and of ambiguity in public relations in particular.

Future Research

Hopefully, future research will address two major shortcomings of these exploratory studies. The shortcomings are: (1) lack of random assignment to the treatment condition and comparatively small numbers of subjects, and (2) lack of a consistently reliable measure of TIA.

Since the student respondents to these studies do not represent a random sample of any broader population, inferential tests of statistical significance based on their responses cannot to generalized to other populations. Because the results reported here apply only to the student respondents in these two studies, the results may be of only conceptual significance. Replications with larger samples alone can determine whether critical values of tests of significance reported here are generalizable.

Such replications with larger sample sizes might also help address the second problem of lack of consistency in reliability. For example, a minimum sample of 160 subjects is needed to factor analyze Budner's 16-item scale; factor analyses might help sort out some of the inconsistencies of what appears to be a multi-dimensional measure. Larger sample sizes would also be expected to bolster reliabilities for the TIA in public relations and teaching evaluation scales reported in this paper.

The literature review on teaching techniques in public relations identifies more than a dozen appraches that, on the surface, appear to hold as much or more potential for increasing tolerance of ambiguity among students of public relations than the technique tested in Study 2. Additional experimental research will help identify which techniques are superior in increasing tolerance of ambiguity in public relations classrooms. Special attention needs to be paid to techniques which can be successfully adapted in large classroom settings.

How Does TIA in PR Function in the "Real World?"

Finally, future research might examine how different levels of TIA in general and TIA in public relations specifically, on the part of practitioners themselves as well as their clients and other publics, such as journalists, impact the real-world practice of public relations.

It appears that a goal of reducing ambiguity in public relations may be hoping for too much. But the evidence presented here suggests that an alternative goal of increasing tolerance of ambiguity in public relations, at least in the classroom, is possible.

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TABLE 1.
COMPARING DESCRIPTIVE STATISTICS ON TIA SCALE

	STUDY 1 N=128		STUDY 2 Group 1 N=15		STUDY 2 Group 2 N=20	
	MEAN	SD	MEAN	SD	MEAN	SD
Overall TIA Score*	67.02	33.41	75.86	13.70	76.1	10.35
Individual items:						
1-An expert who doesn't come up with a definite answer probably doesn't know too much.+	4.95	1.63	5.33	1.76	5.45	1.32
2-I would like to live in a foreign country for a while.	5.34	2.10	5.13	2.33	4.90	1.97
3-There is really no such thing as a problem that can't be solved.+	4.11	1.91	4.27	2.22	4.45	1.73
4-People who fit their lives to a schedule probably miss most of the joy of living.	3.60	1.75	4.48	1.85	3.85	1.95
5-A good job is one where what is to be done and how it is to be done are always clear.+	4.39	1.82	5.07	1.62	4.55	1.85
6-It is more fun to tackle a complicated problem than to solve a simple one.	4.60	1.58	4.47	2.00	4.90	1.59
7-In the long run it is possible to get more done by tackling small, simple problems rather than large and complicated ones.+	3.95	1.95	4.33	1.84	4.35	1.76
8-Often the most interesting and stimulating people are those who don't mind being different and original.	6.05	1.24	6.07	1.49	5.95	1.00
9-What we are used to is always preferable to what is unfamiliar.+	4.07	1.72	4.93	1.67	4.20	1.91

	STUDY 1 N=128		STUDY 2 Class 1 N=15		STUDY 2 Class 2 N=20	
	MEAN	SD	MEAN	SD	MEAN	SD
10-People who insist upon a yes or no answer just don't know how complicated things really are.	4.35	2.02	3.53	1.73	4.70	1.69
11-A person who leads an even, regular life in which few surprises or unexpected happenings arise really has a lot to be grateful for.+	5.06	1.60	5.40	1.77	5.05	1.73
12-Many of our most important decisions are based upon insufficient information.	4.22	1.65	3.60	4.01	4.95	1.43
13-I like parties where I know most of the people more than ones where all or most of the people are complete strangers.+	2.50	1.76	2.53	1.30	2.75	1.74
14-Teachers/supervisors who hand out vague assignments give a chance for one to show initiative and originality.	3.43	1.92	4.40	2.29	4.50	1.61
15-The sooner we all acquire similar values and ideals the better.+	5.86	1.33	6.20	.78	5.20	1.77
16-A good teacher is one who makes you wonder about your way of looking at things.	5.48	1.48	5.13	1.81	6.15	.81

+-Item reverse coded.
* Scoring on this item 16=strongly disagree to 112=strongly agree. Scoring on all other items 1=strongly disagree to 7=strongly agree.

TABLE 2.
COMPARING DESCRIPTIVE STATISTICS ON TIA IN PR SCALE

	STUDY 1 N=128		STUDY 2 Class 1 N=15		STUDY 2 Class 2 N=20	
	MEAN	SD	MEAN	SD	MEAN	SD
Overall TIA in PR:*	37.59	20.01	44.06	4.04	44.30	7.24
Individual items:						
1-Public relations seems pretty straight forward to me.+	4.38	1.77	4.13	1.81	4.05	1.99
2-Public relations appears to have to sort out a lot of conflicting information.	5.10	1.86	5.53	1.30	5.35	1.81
3-In any given situation in public relations, you always know where you stand.+	5.54	1.34	6.07	.80	5.55	1.43
4-More often than not, the problems that public relations has to solve seem complicated and confusing.	4.19	1.91	3.80	1.66	4.80	1.44
5-There are so many variables in a public relations situation that you need to be prepared for anything.	5.73	2.60	6.60	.63	6.35	.81
6-In most public relations problems, the appropriate courses of action are crystal clear.+	5.02	2.82	5.80	.95	5.65	1.46
7-Even complicated public relations problems are usually simple to solve.+	4.95	2.55	5.47	1.30	5.25	1.48
8-If I worked in public relations, I would personally find it hard to say "I don't know but I'll find out" to a journalist or my boss when I didn't have all the facts.+	5.27	2.89	6.67	.62	6.60	.94

+-Item reverse coded.
* Scoring on this item 8=strongly disagree to 64=strongly agree. Scoring on all other items 1=strongly disagree to 7=strongly agree.

TABLE 3.
COMPARING DESCRIPTIVE STATISTICS ON TEACHING EVALUATION SCALE

	STUDY 1 N=128		STUDY 2 Class 1 N=15		Class 2 N=20	
	MEAN	SD	MEAN	SD	MEAN	SD
Overall Teaching Evaluation Score:*	22.08	13.14	40.27	2.71	37.60	4.80
1-The instructor for this course presented the material clearly.	3.26	2.36	6.40	1.35	5.60	1.98
2-I was able to develop an overall framework for learning about and understanding PR.	4.15	2.50	6.73	.46	5.90	1.77
3-This course has increased my knowledge and competence about public relations.	4.42	2.48	6.40	1.60	6.75	.44
4-My overall evaluation of this instructor is positive.	3.36	2.53	6.93	.26	6.45	1.05
5-I would recommend this instructor to a friend.	2.96	2.56	7.00	.00	6.50	1.10
6-I learned a great deal in this course.	3.93	2.52	6.80	.41	6.40	1.19

* Scoring on this item 6=strongly disagree to 42=strongly agree. Scoring on all other items 1=strongly disagree to 7=strongly agree.

TABLE 4.
COMPARING RELIABILITY SCORES ON THE SCALES

Study/Group	TIA Scale Alpha	TIA in PR Scale Alpha	Teaching Evaluation Scale Alpha
Study 1 (N=128)	.29	.75	.94
Study 2 (N=35)	.67	.57	.65
Group 1 (N=15)	.70	.32	.43
Group 2 (N=20)	.67	.67	.68

TABLE 5.
STUDY 1: CORRELATIONS AT DIFFERENT TIA LEVELS

TIA: ALL LEVELS (N=128)

	AMB	EVALPR	TEVAL	MAJOR	INTWORK+
AMB	1.0000	.0708	.0152	.0604	-.0263
EVALPR	.0708	1.0000	.4807**	.1284	.2102*
TEVAL	.0152	.4807**	1.0000	.1677	.1322
MAJOR	.0604	.1284	.1677	1.0000	.1484
INTWORK	-.0263	.2102*	.1322	.1484	1.0000

TIA: 22% INTOLERANT (N=29)

	INTOL	EVALPR	TEVAL	MAJOR	INTWORK
INTOL	1.0000	.0494	.2887	.1791	.0322
EVALPR	.0494	1.0000	-.2431	-.2775	-.4118
TEVAL	.2887	-.2431	1.0000	.0948	.3326
MAJOR	.1791	-.2775	.0948	1.0000	.5241*
INTWORK	.0322	-.4118	.3326	.5241*	1.0000

TIA: 30% INTOLERANT (N=38)

	INTOL	EVALPR	TEVAL	MAJOR	INTWORK
INTOL	1.0000	-.0706	-.0434	.0213	-.1792
EVALPR	-.0706	1.0000	.6670**	.6413**	.2158
TEVAL	-.0434	.6670**	1.0000	.6963**	.4958**
MAJOR	.0213	.6413**	.6963**	1.0000	.3575
INTWORK	-.1792	.2158	.4958**	.3575	1.0000

TIA: 50% INTOLERANT (N=64)

	INTOL	EVALPR	TEVAL	MAJOR	INTWORK
INTOL	1.0000	-.1796	-.0636	.0985	-.0497
EVALPR	-.1796	1.0000	.5267**	.2226	.2954*
TEVAL	-.0636	.5267**	1.0000	.3033*	.1971
MAJOR	.0985	.2226	.3033*	1.0000	.3032*
INTWORK	-.0497	.2954*	.1971	.3032*	1.0000

TIA: 10% TOLERANT (N=13)

	TOL	EVALPR	TEVAL	MAJOR	INTWORK
TOL	1.0000	-.5881	.0909	-.0462	.0416
EVALPR	-.5881	1.0000	.3221	-.3462	.2308
TEVAL	.0909	.3221	1.0000	-.6370*	.1570
MAJOR	-.0462	-.3462	-.6370*	1.0000	-.3427
INTWORK	.0416	.2308	.1570	-.3427	1.0000

TIA: 28% TOLERANT (N=35)

	TOL	EVALPR	TEVAL	MAJOR	INTWORK
TOL	1.0000	-.0693	.0279	.0130	-.2293
EVALPR	-.0693	1.0000	.3983*	-.2387	.1547
TEVAL	.0279	.3983*	1.0000	-.3675	.0568
MAJOR	.0130	-.2387	-.3675	1.0000	-.1322
INTWORK	-.2293	.1547	.0568	-.1322	1.0000

1-tailed Signif: * - .01 ** - .001
+AMB=tolerance-intolerance of ambiguity, INTOL=intolerant of ambiguity, TOL=tolerant of ambiguity, EVALPR=evaluation of ambiguity in PR, TEVAL=teaching evaluation, MAJOR=course of study, INTWORK=interest in eventually working in PR.

TABLE 6.
STUDY 2: CORRELATIONS AT DIFFERENT TIA LEVELS

TIA: ALL LEVELS (N=35)

	AMB	EVALPR	TEVAL	MAJOR	INTWORK
AMB	1.0000	.2580	.1467	.1991	-.0125
EVALPR	.2580	1.0000	.0580	.0065	-.2115
TEVAL	.1467	.0580	1.0000	-.1135	-.0508
MAJOR	.1991	.0065	-.1135	1.0000	-.0156
INTWORK	-.0125	-.2115	-.0508	-.0156	1.0000

TIA: 37% INTOLERANT (N=13)

	INTOL	EVALPR	TEVAL	MAJOR	INTWORK
INTOL	1.0000	-.3380	-.1971	.*	.1382
EVALPR	-.3380	1.0000	.0802	.	-.3502
TEVAL	-.1971	.0802	1.0000	.	-.5371
MAJOR	.	.	.	1.0000	.
INTWORK	.1382	-.3502	-.5371	.	1.0000

TIA: 32% INTOLERANT (N=12)

	TOL	EVALPR	TEVAL	MAJOR	INTWORK
TOL	1.0000	.5911	.0719	.0853	-.1841
EVALPR	.5911	1.0000	-.3418	-.0729	-.3110
TEVAL	.0719	-.3418	1.0000	-.2566	.2718
MAJOR	.0853	-.0729	-.2566	1.0000	-.1348
INTWORK	-.1841	-.3110	.2718	-.1348	1.0000

* . = coefficient cannot be computed.

TABLE 7.
STUDY 1: ANOVA AT DIFFERENT LEVELS OF TIA

ANOVA EVALUATION OF AMBIGUITY IN PR
WITH HIGH-/LOW SCORES ON TIA SCALE

SOURCE	DF	SS	MEAN SQ	F VALUE	PROB.
Main Effects	1	84.02	84.02	3.195	.08
Residual	22	578.60	26.30		
Total	23	662.62	28.81		

TABLE 8.
STUDIES 1 AND 2: T-TESTS

Separate Variance Estimate
T-Test for: AMBIGUITY

	Number of Cases	Mean	Standard Deviation	Standard Error	t value	prob.
Study 1	128	71.96	8.133	.719	-1.43	.161
Study 2	35	75.12	12.020	2.092		

Separate Variance Estimate
T-Test for: EVALUATION OF AMBIGUITY IN PR

	Number of Cases	Mean	Standard Deviation	Standard Error	t value	prob.
Study 1	128	40.16	10.940	.967	-2.78	.006
Study 2	35	43.91	5.422	.944		

Separate Variance Estimate
T-Test for: TEACHING EVALUATIONS

	Number of Cases	Mean	Standard Deviation	Standard Error	t value	prob.
Study 1	128	22.08	13.136	1.161	-12.14	.000
Study 2	35	38.85	4.302	.749		

TABLE 9.
GROUPS 1 and 2 in STUDY 2: ANCOVA

ANCOVA PRE-/POST-EVALUATIONS OF AMBIGUITY IN PR

SOURCE	DF	SS	MEAN SQ	F VALUE	PROB.
Model	3	286.77	95.59	3.156	.038
Error	31	938.82	30.28		

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	t VALUE	PROB.
Intercept	1	41.21	11.91	3.45	.001
Group	1	-33.31	16.86	-1.97	.057
PRE	1	.06	.27	.24	.810
POST	1	.75	.38	1.97	.057

ANCOVA PRE-/POST SCORES ON TIA SCALE

SOURCE	DF	SS	MEAN SQ	F VALUE	PROB.
Model	3	3020.62	1006.87	18.97	.0001
Error	31	1645.37	53.07		

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	t VALUE	PROB.
Intercept	1	-20.07	16.05	-1.25	.220
Group	1	35.45	20.94	1.69	.100
PRE	1	1.29	.21	6.01	.000
POST	1	-.44	.28	-1.57	.125